

What Is Claimed Is:

1 1. A method for configuring a plurality of network interfaces
2 coupling a plurality of computers, comprising:
3 receiving a request at a computer of the plurality of computers to configure
4 the plurality of computers into a cluster of computers, wherein the cluster of
5 computers function in concert as a single unit;
6 establishing at the computer whether a network interface of the plurality
7 of network interfaces is one of private and public, wherein a private network
8 interface is used for intercommunications within the cluster of computers and a
9 public network interface is used for communications with a client computer;
10 determining a connectivity among the plurality of computers;
11 calculating a configuration for the cluster of computers; and
12 installing the cluster of computers using the configuration.

1 2. The method of claim 1, wherein establishing whether the network
2 interface is one of private and public includes:
3 sending a ping message on the network interface;
4 receiving a plurality of responses to the ping message on the network
5 interface;
6 sending a router discovery message on the network interface;
7 listening on the network interface for a response to the router discovery
8 message; and
9 classifying the network interface as public or private based on responses
10 received, wherein the network interface is classified as private if a number of
11 responses to the ping message is less than or equal to a number of computers in

- 1 the cluster and if no response was received from the router discovery message,
- 2 otherwise classifying the network interface as public.

- 1 3. The method of claim 1, wherein determining the connectivity
- 2 among the plurality of computers includes:
 - 3 sending a message on the network interface, wherein the message
 - 4 identifies a sending computer and the network interface;
 - 5 listening for a response to the message on the network interface; and
 - 6 creating a data structure containing a matrix of responses received for the
 - 7 network interface.

1 4. The method of claim 3, wherein sending the message includes
2 using a data link provider interface (DLPI).

- 1 5. The method of claim 3, wherein calculating the configuration for
- 2 the cluster of computers includes:
 - 3 requesting the matrix from each computer in the plurality of computers;
 - 4 combining the matrix from each computer into a master matrix;
 - 5 examining the master matrix for a pair of computers with at least two
 - 6 private network interfaces; and
 - 7 adding the pair of computers to the cluster of computers.

1 6. The method of claim 1, further comprising:
2 presenting the configuration to an administrator; and
3 allowing the administrator to edit the configuration.

1 7. The method of claim 6, wherein presenting the configuration to the
2 administrator includes one of displaying the configuration on a web browser and
3 displaying the configuration on a text-based display screen.

1 8. The method of claim 7, wherein allowing the administrator to edit
2 the configuration includes:
3 accepting a change to the configuration from the administrator;
4 verifying that the change to the configuration does not violate an
5 established rule for the configuration; and
6 if the change to the configuration is valid, incorporating the change into
7 the configuration.

1 9. The method of claim 8, further comprising passing the
2 configuration to a configuration program for configuration of the cluster.

1 10. A computer-readable storage medium storing instructions that
2 when executed by a computing device causes the computing device to perform a
3 method for configuring a plurality of network interfaces coupling a plurality of
4 computers, the method comprising:
5 receiving a request at a computer of the plurality of computers to configure
6 the plurality of computers into a cluster of computers, wherein the cluster of
7 computers function in concert as a single unit;
8 establishing at the computer whether a network interface of the plurality
9 of network interfaces is one of private and public, wherein a private network
10 interface is used for intercommunications within the cluster of computers and a
11 public network interface is used for communications with a client computer;
12 determining a connectivity among the plurality of computers;

13 calculating a configuration for the cluster of computers; and
14 installing the cluster of computers using the configuration.

1 11. The computer-readable storage medium of claim 10, wherein
2 establishing whether the network interface is one of private and public includes:
3 sending a ping message on the network interface;
4 receiving a plurality of responses to the ping message on the network
5 interface;
6 sending a router discovery message on the network interface;
7 listening on the network interface for a response to the router discovery
8 message; and
9 classifying the network interface as public or private based on responses
10 received, wherein the network interface is classified as private if a number of
11 responses to the ping message is less than or equal to a number of computers in
12 the cluster and if no response was received from the router discovery message,
13 otherwise classifying the network interface as public.

1 12. The computer-readable storage medium of claim 10, wherein
2 determining the connectivity among the plurality of computers includes:
3 sending a message on the network interface, wherein the message
4 identifies a sending computer and the network interface;
5 listening for a response to the message on the network interface; and
6 creating a data structure containing a matrix of responses received for the
7 network interface.

1 13. The computer-readable storage medium of claim 12, wherein
2 sending the message includes using a data link provider interface (DLPI).

1 14. The computer-readable storage medium of claim 12, wherein
2 calculating the configuration for the cluster of computers includes:
3 requesting the matrix from each computer in the plurality of computers;
4 combining the matrix from each computer into a master matrix;
5 examining the master matrix for a pair of computers with at least two
6 private network interfaces; and
7 adding the pair of computers to the cluster of computers.

1 15. The computer-readable storage medium of claim 10, the method
2 further comprising:
3 presenting the configuration to an administrator; and
4 allowing the administrator to edit the configuration.

1 16. The computer-readable storage medium of claim 15, wherein
2 presenting the configuration to the administrator includes one of displaying the
3 configuration on a web browser and displaying the configuration on a text-based
4 display screen.

1 17. The computer-readable storage medium of claim 16, wherein
2 allowing the administrator to edit the configuration includes:
3 accepting a change to the configuration from the administrator;
4 verifying that the change to the configuration does not violate an
5 established rule for the configuration; and
6 if the change to the configuration is valid, incorporating the change into
7 the configuration.

1 18. The computer-readable storage medium of claim 17, wherein the
2 method further comprises passing the configuration to a configuration program for
3 configuration of the cluster.

1 19. An apparatus that facilitates configuring a plurality of network
2 interfaces coupling a plurality of computers, comprising:
3 a receiving mechanism configured to receive a request at a computer of the
4 plurality of computers to configure the plurality of computers into a cluster of
5 computers, wherein the cluster of computers function in concert as a single unit;
6 an establishing mechanism configured to establish at the computer
7 whether a network interface of the plurality of network interfaces is one of private
8 and public, wherein a private network interface is used for intercommunications
9 within the cluster of computers and a public network interface is used for
10 communications with a client computer;
11 a determining mechanism configured to determine a connectivity among
12 the plurality of computers;
13 a calculating mechanism configured to calculate a configuration for the
14 cluster of computers; and
15 an installing mechanism configured to install the cluster of computers
16 using the configuration.

1 20. The apparatus of claim 19, further comprising:
2 a sending mechanism configured to send a ping message on the network
3 interface;
4 a listening mechanism configured to receive a plurality of responses to the
5 ping message on the network interface;

6 wherein the sending mechanism is further configured to send a router
7 discovery message on the network interface;
8 wherein the listening mechanism is further configured to receive a
9 response to the router discovery message on the network interface; and
10 a classifying mechanism that is configured to classify the network
11 interface as public or private based on responses received, wherein the network
12 interface is classified as private if a number of responses to the ping message is
13 less than or equal to a number of computers in the cluster and if no response was
14 received from the router discovery message, otherwise classifying the network
15 interface as public.

1 21. The apparatus of claim 19, further comprising:
2 a sending mechanism that is configured to send a message on the network
3 interface, wherein the message identifies a sending computer and the network
4 interface;
5 a listening mechanism that is configured to receive a response to the
6 message on the network interface; and
7 a creating mechanism that is configured to create a data structure
8 containing a matrix of responses received for the network interface.

1 22. The apparatus of claim 21, wherein the sending mechanism is
2 configured to use a data link provider interface (DLPI).

1 23. The apparatus of claim 21, further comprising:
2 a requesting mechanism that is configured to request the matrix from each
3 computer in the plurality of computers;

4 a combining mechanism that is configured to combine the matrix from
5 each computer into a master matrix;
6 an examining mechanism that is configured to examine the master matrix
7 for a pair of computers with at least two private network interfaces; and
8 an adding mechanism that is configured to add the pair of computers to the
9 cluster of computers.

1 24. The apparatus of claim 19, further comprising:
2 a presentation mechanism configured to present the configuration to an
3 administrator; and
4 an editing mechanism configured to allow the administrator to edit the
5 configuration.

1 25. The apparatus of claim 24, wherein the presentation mechanism is
2 configured to present the configuration to the administrator by one of displaying
3 the configuration on a web browser and displaying the configuration on a text-
4 based display screen.

1 26. The apparatus of claim 25, further comprising:
2 an accepting mechanism that is configured to accept a change to the
3 configuration from the administrator;
4 a verifying mechanism that is configured to verify that the change to the
5 configuration does not violate an established rule for the configuration; and
6 an incorporating mechanism that is configured to incorporate the change
7 into the configuration, if the change to the configuration is valid.

1 27. The apparatus of claim 26, further comprising a passing
2 mechanism configured to pass the configuration to a configuration program for
3 configuration of the cluster.

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